

O. HEATH.
LAST TUBE SUPPORT.
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999,783.

Patented Aug. 8, 1911.

Fig. 1.

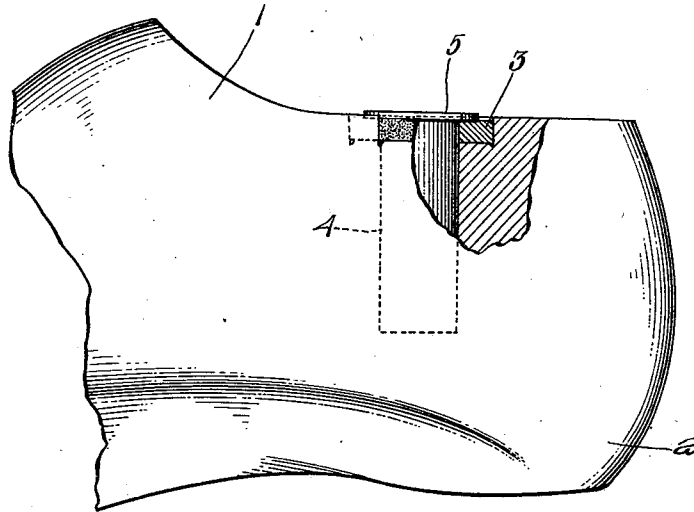
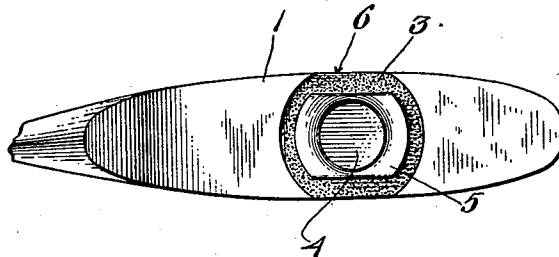


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

OSCAR HEATH, OF BROCKTON, MASSACHUSETTS.

LAST-TUBE SUPPORT.

999,783.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OSCAR HEATH, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Last-Tube Supports, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to the heel end of a last and consists of the combination with the cone or top of the heel-end of a last of a block of relatively hard, non-shrinkable material such as fiberoid capable of frictionally gripping hard against iron, set into the middle of the cone in position to hold and retain the thimble or jack tube, which preferably is flared out or laterally flanged at its top end to further facilitate its retention and support by the block of fiberoid and cooperate with the latter in receiving the blows and pressures which commonly crush and splinter the cone.

My invention has three principal objects, viz., the provision of means to prevent the crushing and splintering of the top of the heel part, the provision of means for supporting the thimble or tube, and a combination of parts whereby the thimble cannot tend to drop out from the heel part.

Regarding the last mentioned object, jack tubes or spindle thimbles are usually set directly in the wood of the last and as the latter invariably shrinks more or less they are thereby left loose in the wood and tend to drop out, so that transverse rivets, external corrugations or spur-like projections have been provided for holding them in notwithstanding their looseness. I provide (either with or without these usual means) a block or ring of material which does not expand or contract under usual conditions of use, mount this block or ring in the cone of the last and then drive the tube down into and through this block with a tight driving fit so that the tube is retained by this non-shrinkable, friction gripping block or ring, and the latter, being of a fibrous nature, is readily glued or otherwise fastened to or into the last.

Regarding the first mentioned object, which is of paramount importance from a practical standpoint, it will be at once evident that, as the crushing and splintering of the cone of the last is brought about by the

pressure transmitted by the thimble to the adjacent wood of the last against which the thimble usually bears directly, this crushing and splintering of the wood is largely eliminated by providing between the thimble and the wood a block or ring of material such as hard fiberoid which does not tend to crush or splinter and which is nevertheless somewhat yielding (as distinguished from iron, for example) so that it receives and absorbs the pressures and blows from the thimble which the latter would otherwise transmit with injurious effect directly to the wood, and as further facilitating the preservation of the wood and at the same time carrying out the second of my objects above mentioned, I provide the thimble with a flaring upper end or laterally extending flange which overlies and rests directly down upon said block or ring of fiberoid or similar material, which is embedded in the cone of the last about the thimble.

In the accompanying drawings, in which I have shown a preferred embodiment of the invention, Figure 1 shows the heel end of a last provided with my invention, parts being broken away and sectioned for clearness of illustration; and Fig. 2 is a top plan view thereof.

It will be understood that my invention is applicable to practically all kinds of lasts. In the cone or top 1 of the heel part 2 I set in a ring or block 3 of fiber board, fiberoid, or other similar hard, durable, fibrous material, centrally apertured to receive a jack tube or thimble 4 which is driven with a tight fit down into place as shown in Fig. 1. This thimble preferably has a flared upper end or flange 5 which rests upon and is directly supported by the block 3.

The manufacture of my construction is exceedingly simple and inexpensive. Instead of simply boring the usual hole for the thimble, I provide the boring tool with a shouldered bit which corresponds in diameter to the size of the circular block or ring 3, so that as the thimble hole is being bored, the recess for the block 3 is simultaneously bored by the same tool. The block or ring 3 is then smeared with glue or, it may be, is simply driven into its recess with an exceedingly tight fit, and then the flanged thimble is driven hard down through the ring 3 and into the place in the last. Each side of the annular block 3 is slabbled off more or less flat as indicated at 6 into alinement with the

plane of the adjacent side of the last. Preferably also the thimble flange is longer lengthwise of the last than transversely thereof. The material of the member 3 is such that it
5 clings or grips, with a strong frictional engagement, the metal tube 4 and does not shrink away from the latter so as to loosen its hold on the tube in the course of the use of the last in the manufacture of shoes
10 (when the last always shrinks under the constantly changing conditions from wet to dry and vice versa). Thus the tube is prevented from loosening and dropping out, the last is prevented from being split (as the tube is
15 strongly upheld at its upper end so that its lower end does not drive down as badly as heretofore), the cone is preserved from splintering notwithstanding that the greater part of the wood is left exposed at the top,
20 and, as the member 3 is annular or at least set into a shouldered recess, said supporting and shock-absorbing member cannot shift, and needs no holding nails or screws so that

it transmits tipping or lateral strains of the tube directly to the wood, *i. e.*, to said 25 shoulders.

Having described my invention, what I claim as new and desire to secure by Letters Patent is.

A last, having its heel end provided with 30 a boring to receive a thimble, and an enlarged countersunk recess at the mouth of said boring, a thimble fitted in said boring, and a block of non-shrinkable, friction-gripping material tightly fitted in said counter- 35 sunk recess and having an aperture to tightly embrace said thimble and permanently hold the same in place.

In testimony whereof, I have signed my name to this specification, in the presence of 40 two subscribing witnesses.

OSCAR HEATH.

Witnesses:

WM. J. PIKE,
M. J. SPALDING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
